



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,254	12/01/2003	John D. Zalewski	6978-000288	1943

27572 7590 03/23/2005

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. BOX 828  
BLOOMFIELD HILLS, MI 48303

EXAMINER

SCHWARTZ, CHRISTOPHER P

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/725,254

Applicant(s)

ZALEWSKI ET AL.

Examiner

Christopher P. Schwartz

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 8-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group II in the reply filed on 12/29/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 8-32 are pending and claims 1-7 have been canceled.

### ***Drawings***

2. The drawings are objected to because numerals 72A-72G have been utilized twice in figure 2. It appears the second set should be changed to "74". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

Art Unit: 3683

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8- 11,13-15,17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Hara et al. '075 and Nagae.

Regarding claim 1 Frost shows a vehicle comprising an engine (inherent) a primary driveline 36,38 and having a pair of wheels coupled to a brake (also inherent but see figure 7) a secondary driveline having a pair of second wheels and coupled to a secondary driveline 44,46; a clutch 88 capable of interconnecting the engine to the secondary driveline. Frost also shows sensors at 54 for determining proper control of the hydraulic control system 58 via controller 52.

Frost lacks the specifics of the wheel brakes and clutch fluidly connected

Hara et al. Is relied upon to show such systems are probably interrelated, as seen in figure 1. Note the ABS actuator, however, at 36 and its function.

The reference to Nagae is relied upon to provide a more detailed showing of the ABS system including the wheel modulators 40-46 and sensors at 72. Note also the clutch at 90 which is actuator controlled.

Art Unit: 3683

One having ordinary skill in the art at the time of the invention would have found it obvious to have provided the vehicle of Frost with a hydraulically interrelated brake and clutch system for vehicle stability and traction control on an all wheel or four wheel drive vehicle that would reduce costs by reducing the number of systems employed.

Regarding claim 9 Nagae is relied upon to show a similar system to that of Frost, as modified, but to provide a clearer picture of the valve and sensor arrangements of a typical ABS system as shown in figure 7.

The requirements of claims 10,11,13-15 are fairly taught by the combined teachings of the references above.

Regarding claim 17 these limitations are fairly suggested by the references above. It is old and well known to detect pressures applied to the brakes and/or clutches in order to modulate it.

Regarding claims 18-20 these limitations are met.

Regarding claim 21,22 simply to use one actuator and fluid source each for the brakes and clutch would have been an obvious duplication of known components in order to provide some redundancy into the system, but at a higher cost.

5. Claims 12, 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Frost in view of Hara et al. '075 and Nagae as applied to claims 8,15 above, and further in view of US publication to Matsuno et al or US publication to Porter '851

Regarding claims 12,16 US publications to Matsuno et al. or Porter are relied upon to provide the known concept of a drive axle assembly 23 incorporating a

Art Unit: 3683

hydraulically controlled clutch at 61 (see Matsuno). Porter provides a similar description in figures 1 and 2 and on page 2 of the document.

To have employed such a clutch in the drive axle of Frost, as modified, would have been obvious to the ordinary skilled worker in the art as an alternative option of providing a limited slip differential, and therefore better traction.

6. Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of Nagae and Porter '851.

Regarding claims 23-32 Hara et al. and Nagae are relied upon as discussed above. Note the transfer case at 22 of Hara et al. appears to be connected to the ABS system via the hydraulic pressure supply system at 16. Nagae is relied upon for the description of clutch 90 and the more detailed showing of the brake system. Porter is relied upon to show that the traction control system (commonly an integral part of stability control systems that also incorporate ABS systems) is fluidicly coupled to the clutch at 44.

The requirements of claims 24-32 are fairly suggested by the combined teachings of the references above and the general knowledge available to one of ordinary skill in the art.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **The references cited should be carefully reviewed before preparing a response to the action above as they also show the concepts known to the ordinary skilled worker..**

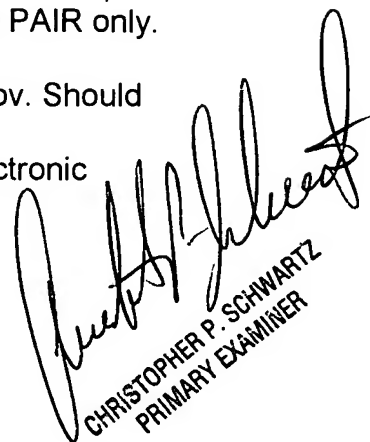
Art Unit: 3683

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Schwartz whose telephone number is 703-308-0576. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cps  
3/17/05



CHRISTOPHER P. SCHWARTZ  
PRIMARY EXAMINER